

Mallophaga of the Mammals of Panama

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Mallophaga are obligatory external parasites and host-specific; therefore, their distribution is dependent entirely upon distribution of the hosts. Some species of Mallophaga are restricted to a single host species, and others are restricted to a host genus or closely related genera. With few exceptions, the same species of Mallophaga are found on a mammal species throughout its range without regard to host subspecies. In addition, many groups of mammals do not harbor Mallophaga. These factors have been considered in the compilation of this list.

Species collected in Panama are marked with an asterisk. Species are also listed which should be found in Panama, but to date have not been collected in that country. If a host is found in Costa Rica, Panama and Colombia, and a parasite has been recorded from Costa Rica or Colombia, it can be found in Panama with adequate collecting.

Specimens examined are in collections of the author, United States National Museum, Gorgas Memorial Laboratory, and the Chicago Natural History Museum. Collections were made by John H. Paine, Alexander Wetmore, Robert M. Altman, Charles M. Keenan, Vernon J. Tipton, Eustorgio Mendez, Phyllis T. Johnson, Lloyd E. Rozeboom, William H. Komp, Lawrence H. Dunn, and others not recorded.

Detailed taxonomic discussions are not included since these are available in *Os Malófagos de Mamíferos* published by the late Dr. F. L. Werneck in 1948 and 1950 (see References).

Family Trimenoponidae

Cummingsia intermedia Werneck

Cummingsia intermedia Werneck, 1937, Mem. Inst. Oswaldo Cruz, 32: 70, figs. 1-6.

This species is found on hosts of the genus *Marmosa*.

Cummingsia peramydis Ferris

Cummingsia peramydis Ferris, 1922, Parasitology, 14: 85, figs. 2d, 3e, 4e, 8.

This species is found on hosts of the genus *Monodelphis*.

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* **Harrisonia uncinata** Ferris

Harrisonia uncinata Ferris, 1922, loc. cit., p. 81, figs. 2c, 3c, 4d, 6.

Collected from *Proechimys semispinosus* at Gamboa, Fort Clayton, Fort Davis, Fort Kobbe, Madden Dam, Summit, Cocoli, Camp Piña, and Curundu (Canal Zone); Almirante (Bocas del Toro); and Cerro Azul (Panamá).

* **Trimenopon hispidum** (Burmeister)

Gyropus hispidus Burmeister, 1838, Handb. Ent., 2: 443.

Collected from laboratory guinea pigs, *Cavia porcellus*, at Corozal (Canal Zone) and Panama City.

Family **Boopidae*** **Heterodoxus spiniger** (Enderlein)

Menopon spiniger Enderlein, 1909, Denkschr. Med. Nat. Ges., Jena, 14: 80, pl. 8, figs. 4-5.

Collected off dogs in Panama City.

Family **Gyropidae*** **Gliricola panamensis** Werneck

Gliricola panamensis Werneck, 1944, Rev. Brasil. Biol., 4: 391, figs. 1-4.

Collected from *Proechimys semispinosus* at Madden Dam, Camp Piña, Fort Kobbe, Gamboa, Fort Clayton, Fort Davis, Curundu, and Cocoli (Canal Zone); and Almirante (Bocas del Toro). Previously recorded from Bugaba (Chiriquí) off "*Proechimys centralis chiriquinus*" (*P. semispinosus chiriquinus*) by Werneck (1948, p. 46) and from the type locality, Camp Pital (Chiriquí) off *Sigmodon hispidus chiriquensis* which is probably a contamination from *P. semispinosus*.

* **Gliricola porcelli** (Schrank)

Pediculus porcelli Schrank, 1781, Enum. Ins. Austr. Indig., p. 500, pl. 1, fig. 1.

Collected from laboratory guinea pigs, *Cavia porcellus*, at Corozal (Canal Zone) and Panama City.

* **Gliricola** sp. (near **panamensis**)

Collected from *Hoplomys gymnurus* at Almirante and Cayo Agua (Bocas del Toro), and Tacarcuna (Darién).

Gyropus aotophilus Ewing

Gyropus aotophilus Ewing, 1924, Proc. U. S. Nat. Mus., 63: 23, fig. 1.

This species is found on hosts of the genus *Aotus*, and has been collected off *A. trivirgatus* elsewhere.

* **Gyropus ovalis** Burmeister

Gyropus ovalis Burmeister, 1838, Handb. Ent., 2: 443.

Collected from laboratory guinea pigs, *Cavia porcellus*, at Corozal (Canal Zone) and Panama City.

* **Gyropus setifer** Ewing

Gyropus setifer Ewing, 1924, loc. cit., p. 22, fig. 10.

Collected off *Proechimys semispinosus* at Fort Clayton, Fort Davis, Fort Kobbe, Cocoli, Madden Dam, Gamboa, Camp Piña, Summit, Fort Gulick and Curundu (Canal Zone); and Almirante (Bocas del Toro). Collected off *Hopломys gymnurus* at Tacarcuna (Darién), Curundu (Canal Zone), Almirante (Bocas del Toro), Salinas Place, Aguadulce (Coclé), and Cerro Azul (Panamá).

* **Macrogyropus costalimai** (Werneck)

Heterogyropus costalimai Werneck, 1931, Bol. Biol. Fac. Med. São Paulo, 18: 21, figs. 1-3.

A slide in the E. W. Stafford Collection has one specimen from *Agouti paca* in Panama. No specific locality is given.

* **Macrogyropus dicotylis** (Macalister)

Gyropus dicotylis Macalister, 1869, Proc. Zool. Soc. London, 1869: 420, fig.

Collected from *Tayassu tajacu* at Gamboa (Canal Zone). It was recorded by Werneck (1948, p. 89) off *Tayassu angulatus bangsi* (*T. tajacu bangsi*) from Porto Belo (Colón).

Family **Trichodectidae*** **Bovicola bovis** (Linnaeus)

Pediculus bovis Linnaeus, 1758, Syst. Nat., ed. 10, p. 611.

This species has been collected off cows, in dairy herd in the Canal Zone.

Bovicola caprae (Gurlt)

Trichodectes caprae Gurlt, 1843, Mag. ges. Thierheilk., 9: 3, pl. 1, fig. 2.

This species should be found on the goat in Panama, as it is world-wide in distribution.

* **Bovicola equi** (Denny)

Trichodectes equi Denny, 1842, Mon. Anopl. Brit., pp. 61, 191, pl. 17, fig. 7.

Prior to 1941, this species was common on horses and mules maintained by the United States Army in the Canal Zone.

* **Bovicola limbatus** (Gervais)

Trichodectes limbatus Gervais, 1844, Walck. Hist. Nat. Ins., Apteres, 3: 313, pl. 48, fig. 4.

Recorded by Werneck (1950, p. 62) from *Capra hircus*, "Mona Island" (Mono Island, Darién).

Bovicola ovis (Schrank)

Pediculus ovis Schrank, 1781, Enum. Ins. Austr. Indig., p. 502, pl. 1, figs. 8-9.

This is a common parasite of sheep and is world-wide in distribution.

Cebidicola semiarmatus (Neumann)

Trichodectes semiarmatus Neumann, 1913, Arch. Parasit., 15: 611, fig. 5.

This species is found on hosts of the genus *Alouatta*.

*** Eutrichophilus maximus** Bedford

Eutrichophilus maximus Bedford, 1939, Onderstepoort Jour. Vet. Sci., 12: 118, fig. 24.

This species was described from a specimen off *Coendou rothschildi* taken at Gamboa (Canal Zone).

Eutrichophilus mexicanus (Rudow)

Trichodectes mexicanus Rudow, 1866, Zeitschr. ges. Naturw., 27: 109, pl. 5, fig. 1.

This species is found on *Coendou mexicanus*.

Felicola felis (Werneck)

Trichodectes felis Werneck, 1934, Mem. Inst. Oswaldo Cruz, 28: 282, figs. 11-14.

This species has been reported from *Felis concolor*, *Felis pardalis* and *Felis yagouaroundi* which are found in Panama, and some other hosts of the genus *Felis* found elsewhere. Specimens are rarely collected, so an adequate evaluation of distribution on the hosts has not been made.

*** Felicola subrostratus** (Burmeister)

Trichodectes subrostratus Burmeister, 1838, Handb. Ent., 2: 436.

This species was collected off the domestic cat in the Canal Zone and Panama City.

*** Geomydoecus** species

A large series from *Macrogeomys cavator*, taken at Casa Pitty, Cerro Punta (Chiriquí), represents a new species which will be described by Dr. Ronald Ward in his revision of the genus.

Lymeon cummingsi Eichler

Lymeon cummingsi Eichler, 1943, Mitt. Deutsch. Ent. Ges., 11: 111.

This species is probably found on *Bradypus infuscatus*.

Lymeon gastrodes (Cummings)

Trichodectes gastrodes Cummings, 1916, Ann. Mag. Nat. Hist., (8), 17: 94, figs. 2-4.

This species is probably found on *Choloepus hoffmanni*.

? Neotrichodectes minutus (Paine)

Trichodectes minutus Paine, 1912, Ent. News, 23: 439, pl. 20, fig. 4.

This species is found on *Mustela frenata*. A specimen collected at La Amenaza, Bambito (Chiriquí) is probably this species.

*** Neotrichodectes pallidus** (Piaget)

Trichodectes pallidus Piaget, 1880, Les Pediculines, p. 405, pl. 42, fig. 9.

Collected from *Nasua nasua* at Almirante (Bocas del Toro).

Trichodectes barbarae Neumann

Trichodectes barbarae Neumann, 1913, Arch. Parasit., 15: 616, fig. 9.

This species is found on *Eira barbara*.

*** Trichodectes canis** (De Geer)

Ricinus canis De Geer, 1778, Mem. Hist. Ins., 7: 81, pl. 4, fig. 16.

Found on dogs in the Canal Zone.

Trichodectes fallax Werneck

Trichodectes fallax Werneck, 1948, Malóf. Mamíf., 1: 122, figs. 159-165.

This species is found on *Procyon cancrivorus*.

*** Trichodectes galictidis** Werneck

Trichodectes galictidis Werneck, 1934, Mem. Inst. Oswaldo Cruz, 28: 161, figs. 1-5.

Recorded by Werneck (1948, p. 119) off *Galictis allamandi* (= "*Grisonia canaster*") from Pacora (Panamá).

*** Trichodectes octomaculatus** Paine

Trichodectes octomaculatus Paine, 1912, Ent. News, 23: 438, pl. 20, fig. 1.

Collected off *Procyon lotor* at Finca de P. H., Cerro Punta (Chiriquí) and from Panama without specific locality.

*** Trichodectes potus** Werneck

Trichodectes potus Werneck, 1934, Mem. Inst. Oswaldo Cruz, 28: 171, figs. 7-10.

Collected off *Potos flavus chiriquensis*, at Camp Piña (Canal Zone).

Tricholipeurus albimarginatus (Werneck)

Trichodectes albimarginatus Werneck, 1936, Mem. Inst. Oswaldo Cruz, 31: 570, figs. 205-212.

This species is found on hosts of the genus *Mazama*.

Tricholipeurus lipeuroides (Megnin)

Trichodectes lipeuroides Megnin, 1884, Naturaliste, no. 62, p. 494.

This species is found on *Odocoileus virginianus*.

Tricholipeurus parallelus (Osborn)

Trichodectes parallelus Osborn, 1896, Bull. U. S. Bur. Ent., (n.s.), 5: 240, fig. 148.

This species is found on *Odocoileus virginianus*.

Suricatoecus quadraticeps (Chapman)

Trichodectes quadraticeps Chapman, 1897, Ent. News, 8: 185, pl. 9, fig.

This species is found on *Urocyon cinereoargenteus*.

References

WERNECK, F. L.

1948. Os Malófagos de Mamíferos. Parte 1: *Amblycera* e *Ischnocera* (*Phloptoridae* e parte de *Trichodectidae*). Revista Brasileira de Biologia. Rio de Janeiro. 243 pp., 431 text figs.

1950. Idem. Parte II: *Ischnocera* (continuação de *Trichodectidae*) e *Rhyncophthirinae*. Instituto Oswaldo Cruz. Rio de Janeiro. 5+ 207 pp. 316 text figs.